



NEB-232.ST25.txt
SEQUENCE LISTING

<110> Lunnen, Keith
Davis, Theodore
Wilson, Geoffrey

<120> Method for Cloning and Expression of SbfI Restriction
Endonuclease and SbfI Methylase in E. coli

<130> NEB-232

<140> 10/668,047

<141> 2003-09-22

<160> 57

<170> PatentIn version 3.2

<210> 1

<211> 1461

<212> DNA

<213> streptomyces species Bf-61

<220>

<221> CDS

<222> (1)..(1461)

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Lys	Leu	Asp	Pro	Thr	Thr	Gln	Ala	Val	Leu	Gly	Gln	Phe	Phe	Thr	Pro	
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atg	aag	gcc	gcc	acg	ctg	atg	gct	tca	atg	ctt	cgg	gtc	gat	gat	ctc	144
Met	Lys	Ala	Ala	Thr	Leu	Met	Ala	Ser	Met	Leu	Arg	Val	Asp	Asp	Leu	
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cgc	gga	acg	gtg	cgg	gtg	ctc	gac	cca	gga	gct	ggt	gtc	ggg	tct	ctg	192
Arg	Gly	Thr	Val	Arg	Val	Leu	Asp	Pro	Gly	Ala	Gly	Val	Gly	Ser	Leu	
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Thr	Ala	Ala	Leu	Val	Asp	Arg	Leu	His	Thr	Glu	Arg	Pro	Asp	Val	Ala	
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gtc	cac	gta	gtt	gcc	gtg	gaa	acc	gac	ccc	ttt	gtc	gtg	cct	tac	ctg	288
Val	His	Val	Val	Ala	Val	Glu	Thr	Asp	Pro	Phe	Val	Val	Pro	Tyr	Leu	
				85					90					95		

cgc	gcc	acc	ctg	gag	gaa	tgt	cgg	aac	gct	tac	ggc	atc	tcc	tac	gac	336
Arg	Ala	Thr	Leu	Glu	Glu	Cys	Arg	Asn	Ala	Tyr	Gly	Ile	Ser	Tyr	Asp	
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cta	gtc	gag	ggc	gac	tat	ttg	ctt	aac	caa	ggg	gcc	aag	ctg	gat	ggc	384
Leu	Val	Glu	Gly	Asp	Tyr	Leu	Leu	Asn	Gln	Gly	Ala	Lys	Leu	Asp	Gly	
		115					120					125				

ccg	ttc	gat	ctt	gta	att	gct	aat	cct	ccc	tac	gga	aag	ctt	gct	tca	432
Pro	Phe	Asp	Leu	Val	Ile	Ala	Asn	Pro	Pro	Tyr	Gly	Lys	Leu	Ala	Ser	

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cag ggg cgg ggg gtt ttc att gtt cct cga tct tgg gcg aac ggg cct Gln Gly Arg Gly Val Phe Ile Val Pro Arg Ser Trp Ala Asn Gly Pro 180 185 190			576
tac tat cgt caa ttt cgc cat tgg ctg atg acc gcg gta agt ctc gat Tyr Tyr Arg Gln Phe Arg His Trp Leu Met Thr Ala Val Ser Leu Asp 195 200 205			624
ata ctt cat gtg ttc gaa agt aga acc aaa gta ttt gcg gac acg aag Ile Leu His Val Phe Glu Ser Arg Thr Lys Val Phe Ala Asp Thr Lys 210 215 220			672
gta aag caa gag aat gtc atc gtt gct ttc agt gtg agg ccg caa agc Val Lys Gln Glu Asn Val Ile Val Ala Phe Ser Val Arg Pro Gln Ser 225 230 235 240			720
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Gly	His	Thr 435	Gln	Val	Asn	Ala	Gly 440	Asp	Leu	Arg	Arg	Leu 445	Pro	Phe	Leu	
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Cys	Arg 450	Glu	Asp	Leu	Ile	Leu 455	Leu	Ala	Lys	Val	Val 460	Pro	Asp	Gly	Leu	
cct	gat	cag	gag	acg	ttg	gat	gcc	gtg	gtg	gcc	aga	ctc	ttc	tgt	gag	1440
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Arg	Gly 50	Thr	Val	Arg	Val	Leu 55	Asp	Pro	Gly	Ala	Gly 60	Val	Gly	Ser	Leu
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Val	His	Val	Val	Ala 85	Val	Glu	Thr	Asp	Pro 90	Phe	Val	Val	Pro	Tyr 95	Leu
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 Pro Phe Asp Leu Val Ile Ala Asn Pro Pro Tyr Gly Lys Leu Ala Ser
 130 135 140
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 Asn Val Tyr Val Ala Phe Trp Val Arg Ala Val Ile Ser Leu Lys Glu
 165 170 175
 Gln Gly Arg Gly Val Phe Ile Val Pro Arg Ser Trp Ala Asn Gly Pro
 180 185 190
 Tyr Tyr Arg Gln Phe Arg His Trp Leu Met Thr Ala Val Ser Leu Asp
 195 200 205
 Ile Leu His Val Phe Glu Ser Arg Thr Lys Val Phe Ala Asp Thr Lys
 210 215 220
 Val Lys Gln Glu Asn Val Ile Val Ala Phe Ser Val Arg Pro Gln Ser
 225 230 235 240
 Ser Ser Val Val Leu Ser Arg Ser Val Ala His Gly Glu Glu Ser Ile
 245 250 255
 Ala Ser Ser Val Pro Phe Ser Ala Leu Val His Asp Glu Asp Asp Asp
 260 265 270
 Lys Ile Val His Phe Ala Glu Ser Ala Ser Val Pro Ser Ala Ala Arg
 275 280 285
 Phe Thr Leu Ala Asp Leu Gly Ile Gly Val Ser Thr Gly Lys Val Val
 290 295 300
 Asp Phe Arg Asn Arg Gln Tyr Leu Thr Asp Asn Leu Asp Ala Ser Gly
 305 310 315 320
 Val Val Pro Met Val Tyr Gln Ser Asn Ile Arg Ser Gly Lys Ile Asp
 325 330 335
 Trp Pro Gln Val Gly Ala Arg Lys Pro Gln Gly Phe Val Ala Val Glu
 340 345 350
 Asp Val Ala Leu Arg Gln Leu Leu Pro Gln Gly Ser Tyr Val Val Val
 355 360 365

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Lys Arg Gln Thr Ala Lys Glu Asp Arg Arg Arg Val Ile Ala Ala Val
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Trp Asp Gly Ala Ser Arg Val Ala Leu Asp Asn Lys Thr Asn Tyr Leu
385 390 395 400

His Glu Ser Gln Arg Pro Leu Glu Lys Asn Val Ala Arg Gly Leu Met
405 410 415

Leu Trp Leu Asn Ser Thr Val Leu Asp Gln Tyr Phe Arg Ala Phe Ser
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Gly His Thr Gln Val Asn Ala Gly Asp Leu Arg Arg Leu Pro Phe Leu
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Cys Arg Glu Asp Leu Ile Leu Leu Ala Lys Val Val Pro Asp Gly Leu
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Val Arg Ser Ala Val Thr Leu Leu Ala Leu Ala Gly Leu Lys Pro Gly
35 40 45

gat cgc tgg gtt gac tcg acc act cca cgc ctt ggc gtt cag aag atc 192
Asp Arg Trp Val Asp Ser Thr Thr Pro Arg Leu Gly Val Gln Lys Ile
50 55 60

atg gac tgg tcc ggc gag cat tgg gcc aag ccg tac gcc acc gga agt 240
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ctc aac gag tac tgc ttg tct gac gaa gca tta cag gcg cta agg gca Leu Asn Glu Tyr Cys Leu Ser Asp Glu Ala Leu Gln Ala Leu Arg Ala 115 120 125	384
tat gga acg gaa ggc ttc gag gaa tct ctt gta gtc ttt ctt gat gaa Tyr Gly Thr Glu Gly Phe Glu Glu Ser Leu Val Val Phe Leu Asp Glu 130 135 140	432
gca tcg aag gcg gtt aaa gcg cga gcg gaa gct ctc cag gct gcg atg Ala Ser Lys Ala Val Lys Ala Arg Ala Glu Ala Leu Gln Ala Ala Met 145 150 155 160	480
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ggg cag aat cca ttg ctg aag aag atg gtc gaa gag ttt gtg ccg cga Gly Gln Asn Pro Leu Leu Lys Lys Met Val Glu Glu Phe Val Pro Arg 180 185 190	576
ttt gca cct cgc tcg acg gtg ctc tac ctc ggg gat act cgt gga aag Phe Ala Pro Arg Ser Thr Val Leu Tyr Leu Gly Asp Thr Arg Gly Lys 195 200 205	624
cat tcc cta ttc gaa cga gag atc ttt gaa gag gtg ctc ggc ctg act His Ser Leu Phe Glu Arg Glu Ile Phe Glu Glu Val Leu Gly Leu Thr 210 215 220	672
ttc gac ccc cat ggt cga atg ccg gac ctt att ctc cat gac gaa gtt Phe Asp Pro His Gly Arg Met Pro Asp Leu Ile Leu His Asp Glu Val 225 230 235 240	720
cgt ggg tgg ctt ttc ctt atg gag gcc gtg aaa agt aaa ggt ccg ttt Arg Gly Trp Leu Phe Leu Met Glu Ala Val Lys Ser Lys Gly Pro Phe 245 250 255	768
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gat cca gac cat ctg att cac ctt aac ggg tct aga ttt ctt ggg ccg Asp Pro Asp His Leu Ile His Leu Asn Gly Ser Arg Phe Leu Gly Pro 305 310 315 320	960
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 35 40 45

Asp Arg Trp Val Asp Ser Thr Thr Pro Arg Leu Gly Val Gln Lys Ile
 50 55 60

Met Asp Trp Ser Gly Glu His Trp Ala Lys Pro Tyr Ala Thr Gly Ser
 65 70 75 80

Arg Glu Asp Phe Arg Lys Lys Thr Leu Arg Gln Trp Val Asp Asn Gly
 85 90 95

Phe Ala Val Leu Asn Ala Asp Asn Leu Asn Ile Ala Thr Asn Ser Gln
 100 105 110

Leu Asn Glu Tyr Cys Leu Ser Asp Glu Ala Leu Gln Ala Leu Arg Ala
 115 120 125

Tyr Gly Thr Glu Gly Phe Glu Glu Ser Leu Val Val Phe Leu Asp Glu
 130 135 140

Ala Ser Lys Ala Val Lys Ala Arg Ala Glu Ala Leu Gln Ala Ala Met
 145 150 155 160

Ile Ser Val Asp Leu Pro Gly Gly Glu Glu Phe Leu Leu Ser Pro Ala
 165 170 175

Gly Gln Asn Pro Leu Leu Lys Lys Met Val Glu Glu Phe Val Pro Arg
 180 185 190

Phe Ala Pro Arg Ser Thr Val Leu Tyr Leu Gly Asp Thr Arg Gly Lys
 195 200 205

His Ser Leu Phe Glu Arg Glu Ile Phe Glu Glu Val Leu Gly Leu Thr
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210

215

220

Phe Asp Pro His Gly Arg Met Pro Asp Leu Ile Leu His Asp Glu Val
225 230 235 240

Arg Gly Trp Leu Phe Leu Met Glu Ala Val Lys Ser Lys Gly Pro Phe
245 250 255

Asp Glu Glu Arg His Arg Ser Leu Gln Glu Leu Phe Val Thr Pro Ser
260 265 270

Ala Gly Leu Ile Phe Val Asn Cys Phe Glu Asn Arg Glu Ser Met Arg
275 280 285

Gln Trp Leu Pro Glu Leu Ala Trp Glu Thr Glu Ala Trp Val Ala Glu
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NEB-232.ST25.txt

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